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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CARTER, WILLIAM JOSEPH

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/773,647	Applicant(s) RAPISARDA, CARMEN	
	Examiner William J. Carter	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-26 is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-11, 14-22, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 5-8, 12, and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/06/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 1-5 are objected to because of the following informalities:

Claims 1-3 denote "lead-free" connections, while claims 4 and 5 denote "lead free" connections, it is suggested that lead-free be referred to in a consistent manner.

In claim 1, line 14, "crimped lead" should read "crimped lead;".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Chien (5,947,580).

With respect to claims 1-3, Chien teaches a circuit board (160) including a plurality of conductor traces (column 9, lines 14-16); a lamp (156) and wires (158) connecting the lamp to the circuit board; a power source (170-173); and a switch (161)

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connected to the circuit board wherein mechanical, lead-free connections are used between the lamps and the wires (column 8, lines 51-56), between the wires and the circuit board (column 8, lines 51-56), between the power source and the circuit board (167-169), and between the switch and the circuit board (column 9, lines 14-15); wherein electrical connections in the module are selected from the following: spring clip (claw terminals); clamped contact; crimped lead; pressure pad applied contact (column 8, lines 51-56).

As for claim 9, Chien teaches a circuit board (160); a battery (170-173) connected to the circuit board; a lamp (156) and wires (158) connected to the circuit board; and a switch (161) connected to the circuit board characterized in that at least a plurality of the connections (batteries between 148-151 and 166-169 and column 8, lines 51-56) are secured by pressuring-applying means.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 10, 11, 14-16, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chien.

With respect to claims 4, 10, and 14, Chien teaches all of the claimed elements as disclosed above in the embodiment depicted in figures 9 - 9-2, except for one of the

mechanical lead-free connections including a spring clamp mechanically securing the battery to the circuit board and spring clamps provide at least a plurality of the electrical and mechanical connections between the lamps and the wires, between the circuit board and the battery, between the wires and the circuit board, and between the switch and the circuit board. In the embodiment depicted in figure 2, Chien teaches spring clamps (8) providing a plurality of mechanical and electrical connections between the battery (9) and the circuit board (3). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine the clamps in the embodiment of figure 2 with the embodiment in figures 9 - 9-2, in order to mount conventional dry cell batteries to the electrical circuitry on the circuit board (column 5, lines 21-24). Claim 9 is included in the above discussion, because the only claimed element not included is the connections being secured by a pressure-applying means, and the taught spring clamp (8) provides a connection by a pressure-applying means.

With respect to claims 11 and 15, Chien teaches all of the claimed elements as disclosed above in the combination of the embodiment in figures 9 - 9-2 and the embodiment in figure 2, including the battery (9) has two sides of opposite polarity and the connections between the battery and the circuit board (3) include a first spring claim (8) and another spring clamp connecting the opposite side of the battery, except Chien only teaches that there is a means for connecting the spring clamp to the electrical circuitry of the circuit board (column 5, lines 21-24). In the embodiment taught in figures 9 - 9-2, Chien teaches traces as a means of electrical connection (column 9, lines 14-16). It would have been obvious to one of ordinary skill in the art, at the time of the

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invention, to use the traces of the embodiment taught in figures 9 - 9-2 to connect the spring clamps to the circuit board of the embodiment in figure 2, in order to be able to print the connections onto the circuit board (column 9, lines 25-29).

As for claims 16 and 18, Chien teaches all of the claimed elements as disclosed above in the combination of the embodiment in figures 9 - 9-2 and the embodiment in figure 2, including in the embodiment in figures 9 - 9-2 the switch (161) has two terminals (connected to 164 and 165) secured to conductor traces (column 9, lines 14-16), except Chien does not teach spring clamps are positioned to secure the terminals to the conductor traces on the circuit board further providing mechanical connections securing the switch to the circuit board. In the embodiment in figure 2, Chien teaches spring clamps (8) making a mechanical and electrical connection, further securing electrical components to the circuit board. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the spring clamps of the embodiment in figure 2 to connect the switch to the conductor traces of figures 9 - 9-2, in order to mechanically and electrically connect the switch to the conductor traces.

As for claim 19, Chien teaches all of the claimed elements as disclosed above in the combination of the embodiment in figures 9 - 9-2 and the embodiment in figure 2, except for a circuit board including a plurality of contacts connected to at least some of the traces and spring clamps securing the wires to the contacts. In the embodiment taught in figure 4, Chien teaches contacts (56 and 57) that are situated on a circuit board and as previously disclosed Chien teaches wires (158) in figures 9 - 9-2 and spring clamps (8) in figure 2. It would have been obvious to one of ordinary skill in the

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art at the time of the invention to use the spring clamps of figure 2 and the wires of figure 9 with the contacts of figure 4, in order to create a mechanical and electrical connection between the wires and the contacts on the circuit board.

As for claim 20, Chien teaches all of the claimed elements dependent on claim 19 above and the further limiting factors are disclosed above in the discussion of claims 16 and 18. The further limiting factors of claim 21 are disclosed above in the discussion of claims 11 and 15.

Claims 17, 22, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chien in view of Smith (2,505,154).

With respect to claims 17, 22, 27, and 28, Chien teaches all of the claimed elements as disclosed above in the combination of the embodiments set forth, except for the module being encased in potting material which, upon curing shrinks and provides additional force to secure the connections. Smith, drawn to lights in footwear, teaches encasing electrical lighting components in a potting material (column 5, lines 24-29), and all potting material, that is not made to not shrink upon curing, will shrink and provide additional force to secure the connections. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the potting material of Smith in the module of Chien, in order to cheaply secure the module in a clear casing that will shrink upon curing and provide additional force to secure the connections.

Allowable Subject Matter

Claims 5-8, 12, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 23-26 are allowed. The prior art does not teach or suggest a resilient, non-conductive polyfoam pad overlying the circuit board and a clamp device clamping the polyfoam pad against the circuit board.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Carter whose telephone number is (571)272-0959. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee S. Luebke can be reached on (571)272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

wjc
09/27/05



RENEE LUEBKE
PRIMARY EXAMINER